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FOR KARNATAKA CLASS 11 PREPARATION

Karnataka 1st PUC Model Question Paper 2027 for Statistics (Paper 2)

EXAM	YEAR	TYPE	SUBJECT
Karnataka Class 11	2027	Sample Paper	Statistics

GOVERNEMENT OF KARNATAKA
KARNATAKA SCHOOL EXAMINATION AND ASSESSMENT BOARD
6th CROSS, MALLESHWARAM, BENGALURU-560 003
2026-27 I PUC MODEL QUESTION PAPER- 2

Subject: 31 - Statistics **Maximum Marks:** 80
Time: 3.00 Hours **No. of Questions:** 38

Instructions:

1. Statistical table and graph sheets will be supplied on request.
2. Scientific calculators are allowed.
3. All working steps should be clearly shown.
4. For Section – A questions, only the first written answers will be considered for evaluation.
5. For questions having diagram and graph, alternative questions are given at the end of the question paper in a separate section for visually challenged students.

SECTION – A

I. Choose the most appropriate answer from the choices given: **(5 X 1 = 5)**

1) The totality of units under consideration is called:
a) Population b) Sample c) A variable d) An attribute

2) While framing a frequency distribution, if class intervals are not considered, is called
a) Open-end frequency distribution b) Continuous frequency distribution
c) Discrete frequency distribution d) Cumulative frequency distribution

3) The geometric mean of 4 and 16 is,
a) 5 b) 6 c) 8 d) 10

4) The range of probability is
a) [0, 1] b) [0.5, 0] c) [0, 0.5] d) [0.5, 1]

5) If 'X' is a random variable and 'a' is a constant then E(aX) is equal to –
a) a b) a E(X) c) aE(X) + b d) b

II. Fill in the blanks by choosing the appropriate answers given in the brackets: **(5 X 1 = 5)**
(3, 0, Mode, Random, Scientific, Class mark)

6) The central value of a class is called _____.

7) _____is a value which occurs most frequently in a set of observations.

8) For leptokurtic distribution, the value of β_2 is greater than _____.

9) An experiment whose outcome is not always unique is a _____experiment.

10) For two independent random variables X and Y, the value of Cov(X,Y) is _____.

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III. Match the following: **(5 X 1 = 5)**

11)

A	B
a. Direct personal observation	i. 0
b. Percentage bar diagram	ii. Standard deviation
c. $\Sigma (x - \bar{x})$	iii. $P(A^C) = 0.4$
d. Root mean square deviation	iv. One dimensional diagram
e. $P(A) = 0.6$	v. Two dimensional diagram
	vi. Primary data

IV. Answer the following questions: **(5 X 1 = 5)**

12) Name the average located from Histogram.

13) Define harmonic mean.

14) Define Mean deviation.

15) Define interpolation.

16) What is the value of V(4), if 4 is a constant?

SECTION – B

V. Answer any FIVE of the following questions: **(5 X 2 = 10)**

17) Write two limitations of Statistics.

18) Mention the sources of secondary data.

19) Find the HM of 4 and16.

20) Find mean if CV=10% and SD=4.

21) In a bi-variate data on x and y, Var(x) = 9, Var(y) = 49 and Cov(x, y) = 20. Find r.

22) What is meant by association of attributes? Name the different methods of measurement.

23) Two fair coins are tossed once. Find the probability of getting two heads.

24) If $E(X) = 5$ and $E(X^2) = 36$, find V(X).

SECTION – C

VI. Answer any FOUR of the following questions: **(4 X 5 = 20)**

25) Mention any five Characteristics of Statistics.

26) Distinguish between census enumeration and sample survey.

27) In a survey of 40 families in a certain locality, the number of children per family was recorded and the following data were obtained.

1	0	3	2	1	5	6	2	2	1	0	3	4	2	5	6	3	2	1	1
3	3	2	4	2	2	3	0	2	1	4	5	3	3	4	4	5	4	2	1

Represent the data in the form of a discrete frequency distribution.

28) Prepare a blank table to show the distribution of students according to

i. College: Government, Aided, Unaided.
ii. Faculty: Science, Commerce, Arts.
iii. Gender: Boys, Girls.

29) Represent the following data regarding the production of paddy (in '000 tons) by simple bar diagram.

Year	2005	2006	2007	2008
Production	90	85	100	105

30) Compute Yule's coefficient of Association from the following data.
(AB) = 150, N = 1000, (A) = 200, (B) = 300.

31) From the following data interpolate the production of cement in 2007.

Year	2005	2006	2007	2008	2009	2010
Production (lakh tons)	44	90	–	160	270	390

VII. Answer any TWO of the following questions: (2 X 5 = 10)

32) Draw a less than Ogive and locate the median from the graph.

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No. of students	3	9	15	30	18	5

33) Calculate the first quartile and sixth decile from the following data.

x	58	59	60	61	62	63	64	65	66
f	2	3	6	15	10	5	4	3	1

34) Following are the marks of 8 students in Statistics and Mathematics. Find coefficient of rank correlation.

Marks in Statistics	25	43	27	35	54	61	37	45
Marks in Mathematics	35	47	20	37	63	54	28	40

35) A box contains cards numbered from 1 to 20. A card is drawn randomly from it. Find the probability of getting a card with: (i) an odd number (ii) a multiple of 4 (iii) a perfect square.

SECTION – D

VIII. Answer any TWO of the following questions: (2 X 10 = 20)

36) The number of runs scored by two batsmen A and B in different innings is as follows:

A	12	115	6	73	7	19	119	36	84	29
B	47	12	76	42	4	51	37	48	13	0

i) Who is better run scorer?
ii) Who is more consistent?

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37) Find the two regression equations from the following data.

x	3	6	5	4	4	6	7	5
y	3	2	3	5	3	6	6	4

Also find correlation coefficient r_{xy}.

38) **a)** In a hostel 60% of students drink tea, 50% of students drink coffee and 20% of students drink both tea and coffee. Find the probability that a randomly selected student drinks either tea or coffee.

b) A random variable X which assumes the values -1, 0 and 1 with respective probabilities 1/4, 1/2 and 1/4. Find the mean and variance.

SECTION - E
(For Visually challenged students only)

29) Write down the procedure to draw simple bar diagram.

32) Write down the procedure to draw Ogives.

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